

“Purifying the Upper Atmosphere”: Women’s Work in Early Radio, 1905-1913

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Abstract: *This essay argues that between 1905 and 1913, female commercial radio operators deployed a range of complicated and contradictory arguments to establish credibility in the new, male-dominated communications field. Women envisioned early radio as a utopian space that would renegotiate gender roles in the American workforce. Female radio operators also engaged in a larger conversation around women’s citizenship and voting rights. However, while wireless companies initially hired female employees to diffuse tense labor relations, a national conversation around women’s dubious moral character and inferior physical capabilities soon animated the field. The essay explores the political, economic, and cultural events that transformed radio from a potentially transgressive space to an industry that instead reinforced gender and class hierarchies: the RMS Republic-Florida disaster in 1909; the formation of the wireless division of the Commercial Telegraphers Union of America in 1910; the American Marconi Company’s takeover of the United Wireless Company in 1912; and finally, the RMS Titanic disaster in 1912 and the subsequent passing of the Radio Act of 1912. These events pushed female radio operators out of the industry. Not until World War I would the federal government and corporations formally recruit women to serve as professional radio operators.*

Keywords: *wireless telegraphy, radio, women, unions, Radio Act of 1912, Titanic, woman’s rights movement, history of technology, radio corporations*

Between November 1910 and April 1911, tales of radio operator Graynella Packer's exploits captured the imaginations of countless young women and inflamed the tempers of scores of male contemporaries. Her story begins aboard the steamship *Comanche* in 1910, when Packer, then a telegrapher, stumbled across the ship's radio station and dreamed of operating one of her own. Hailed as the "first of her sex to enter [a] new calling," Packer traded the older telegraph system for the "wireless game" only a few months later ("Woman at Ship Wireless Key" 5). In the fall of 1910, Packer convinced the Clyde Liner Steamship Company to hire her as a radio operator aboard the *Mohawk*, a passenger ship running daily between New York City and Jacksonville, Florida (Stillings 11).

Yet Packer's fame as a harbinger of woman's professional equality was short-lived. Fearing that women would displace male wireless operators, Packer's co-workers launched a vicious campaign to fire her. In response, Graynella Packer argued that her duties to her vessel and its passengers transcended gender differences, and she rejected attempts to cast her technical acumen as an aberration ("Girl Wireless Operator" 3). Further, Packer's stellar performance aboard the *Mohawk* prodded male supervisors and co-workers to reassess their long-held assumptions about women's lesser intelligence, stamina, and reliability. The *Washington Herald* reported that over the course of her seventeen voyages between Jacksonville, Florida, and New York City, Packer "sometimes [met] very rough weather, and was a good sailor. She appears not to fear the frigid turbulence of winter seas, which her ship must soon encounter" ("Woman to Guide Ship's Wireless" 3). Despite her allies' support, the harassment was so fierce that Packer left radio in April 1911 (Barslaag 251).

Although only twenty documented women filled commercial radio positions before World War I, their contributions to the field and the American workforce should not be dismissed. While scholars such as Susan Douglas have charted the cultural history of nascent radio, and feminist historians such as Michele Hilmes have studied women's contributions to mass broadcasting, women's participation in the earliest stages of commercial radio technology remains poorly understood. I argue that between 1905 and 1913, women wireless operators battled virulent gender discrimination to participate in a new, transcontinental communications system that would transform global media. Women envisioned radio as a utopian space that would renegotiate gender roles in the American workforce: as a voiceless medium, radio had the potential to liberate professional women from gen-

der stereotypes in the modern workplace. However, female radio operators had even greater implications for the American woman's rights movement: If women could be responsible public servants, then they deserved political enfranchisement and the chance to direct the nation's future. In order to establish credibility in the emerging wireless communications field, female wireless operators deployed a range of complicated and contradictory arguments centered on both their essential equality and inherent difference with their male peers.

This essay explores the political, economic, and cultural events that progressively narrowed women's access to the early radio industry: the *RMS Republic-Florida* disaster in 1909, the formation of the wireless division of the Commercial Telegraphers Union of America in 1910, the American Marconi Company's takeover of the United Wireless Telegraph Company in 1912, and finally, the *RMS Titanic* disaster in 1912 and the subsequent passing of the Radio Act of 1912. I investigate the broader context of wireless women to illuminate how radio transformed from a potentially transgressive space to an industry that instead reinforced gender hierarchies.

Graynella Packer was at the vanguard of a new and exotic communications system. Invented in 1895 by Guglielmo Marconi, early radio (or "wireless telegraphy") was a communications system based on "point-to-point" transmissions, in which a radio operator would relay messages in packets of electrical impulses, or Morse Code, over the airwaves to specific recipients (Craig 3). After 1901, when Marconi transmitted messages across the Atlantic Ocean without the aid of telegraph cables, America and other nations rapidly adopted radio as a national and international communications medium. Radio safeguarded ship property and passengers by enabling the crew to remain in constant contact with surrounding vessels and land stations (Jepsen 22). Despite its clear advantages, radio was also a largely unregulated, raucous pioneer field in which hobbyists and professional operators jostled over the airwaves, wireless union strikes shut down coastal communication, and wireless companies unscrupulously depressed wages and launched ruthless corporate takeovers.

Given the new technology's disorderly reputation, it was not until *RMS Republic* wireless operator Jack Binns demonstrated the radio's life-saving potential that the American public fully embraced the profession. When the *Florida* collided with the luxury liner *Republic* in January 1909, the intrepid Binns saved passengers by tirelessly signaling nearby ship and shore wireless stations for help (Douglas 202). His heroism ignited the nation's fasci-

nation with radio exploits. To satisfy Americans' craving for more thrilling tales of wireless heroism, the press also printed stories of women operators' high-seas adventures and "wireless romances." Yet the public's ardor for female operators dampened when critics claimed women were biologically incapable of operating complicated radio equipment and would abandon their post at the first whiff of danger ("Women Get Wireless Fever" 3). As we shall see, public, commercial, and governmental opposition to radio women grew so strong that virtually all of the twenty women working as commercial radio operators before World War I were fired or quit by 1913 (Barslaag 251-253). It would not be until 1917 that women were recruited to fill wartime radio positions (Hilmes 41).

Initially, however, early radio offered respite to women weary of conforming to the gendered workplace. Historian Thomas Jepsen argues that communications systems based on Morse Code's electrical impulses rather than voice transmissions fostered a liminal space that reflected neither the masculine public sphere nor the feminine domestic sphere (196). Male radio operators could communicate with women and be none the wiser, undermining the claim that men had superior technical abilities (Hilmes 132-133). One aspiring female operator found that without "tuning, or station licenses, or assignment of calls, or government supervision—[radio] was just one grand 'etheric melody,' ... and for that reason there was no need of my identity being known to anyone" ("The Autobiography of a Girl Amateur" 490). Yet her discovery provided little solace to the young woman; she was bullied and summarily dismissed when she sought a commercial wireless position. Similarly, while many women enrolled in wireless schools and applied for radio licenses, few successfully penetrated the wireless field.

Quite simply, a radio career was only attainable to a select group of women. Primarily, women's geographic location strongly predicted their ability to be operators. Because most wireless companies focused on ship-to-shore and transoceanic communication, commercial radio operators were based in cities located along the coast, major rivers, or lakes (Craig 5). Consequently, women operators were concentrated in port cities such as New York City, Seattle, and San Francisco ("Courts By a Ship's Wireless" 8; "Woman Runs Wireless" 11; "Some Affairs of Women" 6).

Secondly, radio was most accessible to white, middle-class women who had obtained technical degrees and were connected to men in the radio industry. As the American workplace rapidly professionalized, women

without advanced technical training were quickly shut out of the emerging wireless field (Blackwelder 39; Kessler-Harris 176). While aspiring radio women were often self-taught, operating home-made wireless sets and studying for their radio license in their free time, radio companies increasingly demanded employees have prior experience or specialized education ("The Autobiography of a Girl Amateur" 490). For example, by 1913, the American Marconi Company stipulated that wireless applicants have completed a "common school education," have attended a wireless school, and speak fluent English ("Wireless Situation Reaches Crisis" 2).

At the same time, few radio academies admitted women, so it is unsurprising that successful female applicants were most commonly stenographers working in telecommunications offices or experienced telegraphers ("Girl Only Sixteen" 4; "Women Now Have Opportunity" 26; Sando 100; Barslaag 249; "Now the Wireless Woman" 15; "Woman Runs Wireless" 11). For example, after receiving a degree in telegraphy from Florida's Sutherland College, Graynella Packer managed the Sanford, Florida telegraph office for several years (Stillings TS11). There, she oversaw general operations, personnel, payroll, business records, operator assignments, promotions, and communications with corporate headquarters. Consequently, Packer's transition to radio was relatively smooth.

Requiring technological expertise and promoted as a romantic, adventurous field, the wireless industry particularly appealed to veteran telegraphers displaced by the teletype machine (Barslaag 251). Master telegraphers had belonged to a prestigious technological profession that required substantial training, experience, and manual dexterity. It had also promised employees a middle-class lifestyle (Jepsen 20). However, the invention of the teletype machine in the 1870s, a transmitting device that resembled a typewriter, eliminated the need for expert telegraph operators to manually code and decode messages. Instead, teletype dramatically sped up and simplified the transmitting process (34). Companies then replaced veteran operators with unskilled and poorly paid female clerical staff (11, 37). While radio companies recruited veteran telegraph operators, their stringent screening process effectively barred rank-and-file teletypists from applying ("Wireless Situation Reaches Crisis" 2).

Yearning for professional respect and financial reward, seasoned female telegraphers parlayed their knowledge of Morse and continental code into wireless positions. For example, after her husband died in 1912, Hallie Parmenter-Obert quit her job at Western Union Telegraph Company to become

a seafaring wireless operator. Hoping that the career change would better support her four-year old daughter, Parmenter-Obert snatched any free moment to study the commercial radio licensing exam ("Now the Wireless Woman" 15). Similarly, seeking relief from long, unpredictable hours, former telegrapher Anna Nevins was hired at the United Wireless Telegraph Company's main office in 1906 ("Courts by a Ship's Wireless" 8). By 1909, Nevins' speed and accuracy landed her an "airy perch of an office" on the roof of New York City's Waldorf-Astoria Hotel, where she handled "all the commercial business of the busiest station in the entire service of the United Wireless Telegraph Company." Most enviably, Nevins enjoyed an eight-hour day, regular hours, and her own office ("Woman at the Wireless Key").

Finally, and most strikingly, of the eight married radio women, seven had spouses working in wireless or other radio-related positions. Radio husbands could act as buffers between their wives and the wireless companies and union men set on ousting female competitors. For example, Catherine Tucker first worked as a bookkeeper and then as a telegrapher in her husband's telegraph office in Portland, Oregon ("Woman Runs Wireless" 11). As wireless gained popularity, the couple "switched from the old wire to the aerogram [wireless] business" ("She is First Woman Wireless Operator" 2). Trained as an electrician, Tucker managed several Pacific Coast wireless stations with her husband before working aboard the steamship *Indianapolis*, making four trips daily between Seattle and Tacoma until 1910 ("Woman Runs Wireless" 11; "What Women Are Doing" 4). Additionally, United Wireless Telegraph Company (UWTC) wireless operator May Redfern's marriage to her office manager likely enabled her to survive the American Marconi Company's acquisition of UWTC in 1912 and its subsequent purge of female staff ("Duluth Branch Working Well" 9). One final anecdote reveals the stark sexual economy of wireless radio: In 1916, a "progressive Boston young lady, who, being a radio operator, found she could not gain a position on a certain ship as two operators were required and one of them was a man! What did she do? Very simple she married him!" ("The Feminine Wireless Amateur" 397) Wireless operators' husbands "very simply" gave some women a slim toehold on a notoriously impenetrable field.

Indeed, female pioneers entered the radio industry at a highly volatile moment in the field's labor-relations. In the wake of the *Republic* disaster and wireless operator Jack Binn's heroism, unscrupulous radio companies exploited wireless's budding popularity to inflate their stock and snag lucrative contracts while underpaying their employees (Barslaag X). In 1908,

the Commercial Telegraphers Union of America (CTUA) complained that wireless companies blacklisted union men, maintained unclear promotion and salary policies, required ten hour days without overtime, and ignored employee seniority in hiring decisions ("Wireless Men Poorly Paid" 55). Further, oceangoing operators scrambled for work because so few ships possessed radio equipment ("Youthful Marconis" 53).

In 1909, the CTUA created an official wireless division to more effectively lobby for better working conditions ("Wireless Operators' Union" 9). Chafing at shoddy working conditions, one wireless man exhorted his "brothers of wireless" to "wake up ... use some of your spare time for the good of the [wireless] order" ("Wireless Men Poorly Paid" 55). CTUA wireless locals regularly staged strikes against radio corporations, starting in 1911 when the Chicago chapter demanded that UWTC provide back pay ("Call Off Wireless Strike" 11).

Against the backdrop of labor unrest, some wireless companies touted female employees as the solution to union rabble-rousing, setting male radio operators more firmly against the few women staffing wireless stations (Barslaag 251). This was a familiar tactic among employers hoping to hire women as strikebreakers (Downey 107-108). UWTC, in particular, believed women were pliable workers and hired at least seven "members of the gentler sex" between 1906 and March 1912, when the company declared bankruptcy ("Women May Fill Wireless Posts" 1). Both UWTC officials and steamship crews claimed that male employees "in many cases are unsatisfactory, are not on hand at sailing time, have to be reprimanded for misconduct at sea and neglect to keep their apparatus in good condition" (1). By 1912, UWTC manager R.H. Armstrong announced that women would replace male operators aboard all North Pacific steamships ("Women to Replace Men" 128).

It is unsurprising, then, that women met a chilly reception within the CTUA's wireless ranks. While female telegraphers comprised a quarter of the CTUA's membership, just one woman, Margaret King, belonged to the CTUA's wireless division (Jepsen 105; "El Paso Local No. 68" 356). Instead, wireless divisions lobbied to eliminate female competitors. For example, Graynella Packer enraged her male peers when she predicted that "women will play a great part in the wireless of the future" ("Jacksonville Girl Blazes the Way" 5). Packer decided to quit when erstwhile friends became "indifferent," while other male co-workers transmitted to her "at speeds she couldn't copy, and profanity over the air became thicker than

ever” (Sando 100). As a result, women’s isolation from their fellow wireless sisters undercut their ability to mitigate harassment from male peers and supervisors, while the lack of support from CTUA’s wireless division stymied their ability to collectively negotiate for better working conditions.

Despite male co-workers’ hostility, female wireless operators tacked between three overlapping arguments to carve a niche for themselves within the radio profession. Women individually contended that they were equally proficient radio operators as their male peers, would stick to their post in times of danger, and finally, would civilize the industry with their feminine purity. First, female operators contended that women were just as qualified to operate wireless equipment as men and therefore deserved equal consideration. They echoed an equal rights rhetoric familiar to their politicized female telegraphic counterparts. For example, in 1907, unionized women persuaded the CTUA to strike for better working conditions for female telegraphers, equal pay for equal work, and an end to sexual harassment (Jepsen 105-106). While the Western Union Telegraph Company eventually crushed the strike, strong female labor organizers emerged out of the CTUA’s fight (170-181). Further, while the wireless division opposed radio women, until 1912 the larger CTUA connected radio women’s struggle for professional recognition with their battle for voting rights, protesting, “We have Suffragettes and Unionettes; how about Wirelesettes?” (“We Have Suffragettes” 452).

Similarly, former telegrapher Graynella Packer explicitly identified with women’s broader push for equal treatment in the professional fields (Cott 87-89). Packer told *The Atlanta Constitution* in 1911 that “women are assuming all sorts of responsibilities in the business world these days, and I am only one of many girls who have taken up work that requires qualities which of old were attributed only to men” (5). Additionally, Catherine Tucker detailed how her technical acumen surpassed that of her male peers. Tucker exclaimed, “there is nothing about wireless that I couldn’t do ... I understand the instruments and am my own electrician” (cited in “She is First Woman Wireless Operator” 2). Tucker was “always careful when cleaning up the instruments” because “one can get a nerve-wracking shock.” In contrast, her male coworker “carelessly placed his hand on the dynamo recently while cleaning the apparatus, and there were queer tattoo marks all over his arm. His hair stood right out straight, too” (2).

Secondly, women asserted that they were just as steadfast in a crisis as their male co-workers. Critics claimed that unlike the *Republic*’s Jack

Binns, women's emotional temperament would sabotage their ability to protect their ship or passengers in an emergency. When asked how she would have acted aboard the sinking *Republic*, Graynella Packer retorted, "What would anyone do? I think I should stick to my post; that's all" (cited in "Girl Wireless Operator" 3). Catherine Tucker also posited, "Mr. Binns is a brave man and deserves all the credit he gets. But the fact that he is a man is no reason for believing a woman would not be just as brave under the most trying ordeal" ("A Woman Wireless Operator" 8).

Simultaneously, even as women maintained that they were intellectual equals to men, they strategically reaffirmed gender stereotypes by asserting that women's virtuous natures would professionalize the radio industry. However, women would civilize unruly male operators and harmonize labor relations not to benefit employers, but to improve the field. Their rhetoric echoes mainstream suffragists who insisted that if women were enfranchised, their inherent high-mindedness would elevate the American body politic (Cott 151). Similarly, wireless operator Catherine Tucker reported that when she began working for UWTC, "the boys at the keys were somewhat careless with their words, and that a seasoned mule driver would have to go [far] to hold first place" ("She is First Woman Wireless Operator" 2). However, under Tucker's influence, the men "toned [down] their language in a way that would do credit to a well regulated Bible class at Sunday school, and we're now the best of friends" (2). Soothing male operators' fears that women were merely tools of corporate surveillance, Tucker suggested that passionate men and pure women could jointly bring respect to the new medium.

Packer and Tucker's assertions that women were capable, virtuous technicians had wide-reaching political implications. Some contingents of the woman's rights movement began to champion wireless women as a cause célèbre (Barslaag 251; Stillings 11). For example, radio pioneer Nora Stanton Blanch DeForest, a Cornell University-educated civil engineer and daughter of prominent American suffragist Harriet Stanton Blatch, believed that "science [could]...free women and remake the world" (DuBois 134). Her mother was also "thoroughly alive to the possibilities of the new medium for popular propaganda work" and in 1909 broadcasted a talk on suffrage from the top of New York City's Metropolitan Life Building (DeForest 208). Additionally, the New York State Suffrage Party transmitted pro-suffrage speeches via wireless during its rallies, while wireless women marched in suffrage parades in New York City ("The Feminine Wireless Amateur" 397; "Woman Joins the Navy" 8).

Similarly, hoping that a certified “wireless heroine” would prove women’s essential parity with men, suffragists placed Graynella Packer’s radio contributions within a larger argument for political enfranchisement. For example, Packer appeared in woman’s rights columns like the *Washington Post*’s “Women Who Count,” which featured “women who are doing things worthwhile, who count for something in the world’s progress” (Stillings 11). Suffragists used women radio operators as evidence that female scientists, engineers, and educators would modernize society and therefore deserved equal citizenship (Cott 224-225).

However, the sinking of the *Titanic* and the passage of the Radio Act of 1912 dramatically limited women’s access to radio positions (Douglas 184, 226-234; Mayes 15). The exponential growth of hobbyist, commercial, and naval stations congested the airwaves, resulting in frequent miscommunication between radio operators (Craig 5). Capitalizing on radio’s unregulated status, the British Marconi Company and other corporations promoted an atmosphere of non-cooperation between their competitors. Radio historian Alvin Harlow writes that many Marconi operators “had strict orders [not to] converse with [or] receive ... messages save the distress call” from other companies (467).

The widespread policy of non-cooperation had disastrous consequences for the New York-bound *RMS Titanic* when the ship struck an iceberg and sank on April 14, 1912. Because of hobbyist and competitor interference, the British Marconi operators aboard the *Titanic* and surrounding vessels were unable to effectively communicate with one another (Douglas 226-233). Further, had nearby ships been equipped with functioning wireless apparatus, two or more wireless operators working in shifts, and auxiliary power for their communications equipment, more lives may have been spared. Consequently, more than fifteen hundred passengers drowned, including one of the *Titanic*’s wireless operators. The tragedy forced the United States to reconsider its complacent attitude toward marine transport and emergency communications.

Congress rapidly convened to reevaluate the country’s wireless regulations. After lengthy congressional hearings and public debate, Congress passed the Radio Act of 1912 (Douglas 234). The law defined the airwaves as public property, giving the Department of Commerce the authority to license qualified individuals and corporations to operate on federally-allocated points along the radio spectrum. The law also regulated non-governmental point-to-point radio transmissions, mandated inter-company coop-

eration and outlined emergency procedures in order to safeguard lives and property at sea (Craig 36). Notably, the act explicitly permitted women to work in the radio field ("Approve Women Operators" 3).

Despite federal officials' protestations to the contrary, the Radio Act of 1912 incidentally perpetuated and institutionalized gender discrimination ("Approve Women Operators" 3). For example, the new radio licensing exam awarded the highest rating only to those applicants who had both passed a written test and been a seagoing wireless operator. Because by 1912 most wireless companies refused to hire women for ship posts, one female operator complained that receiving the "commercial first class" radio designation was next to impossible (The Old Woman 14). She stated, "it's possible to learn what's in the book, but when your lack of experience costs you twenty points, and you have to make seventy-five out of a possible eighty on what you know, it requires considerable application" (10).

As Congress crafted its radio legislation, unionized wireless men also seized the opportunity to oust women once and for all. In July 1912, the New York chapter of the CTUA Wireless Division wrote an open letter to President Taft demanding that the radio legislation should formally bar women from operating commercial wireless stations ("Wireless Men Assail Bill" 11). Additionally, male radio operators took advantage of the Radio Act's requirement that vessels with more than fifty passengers hire at least two wireless operators (Douglas 234). Claiming that it was improper for marine wireless operators of the opposite sex to share the same quarters, wireless men argued that women should be confined to land stations rather than operate seagoing wireless equipment ("The Feminine Wireless Amateur"). The CTUA's wireless men contended that women were dangerous liabilities to maritime safety; rather than continue to transmit S.O.S. messages in times of crisis, female wireless operators would abandon the vessel along with other women and children.

Ironically, while the CTUA as a whole welcomed women wireless operators, it also argued that ship stations were too dangerous, inadvertently validating its wireless division's attempts to bar women from the field completely. In the spring of 1913, in the midst of a strike against the American Marconi Company, CTUA president Sylvester J. Konenkamp demanded that the Department of Commerce and Labor prevent women from operating aboard lake- or ocean-going ships ("Wirelesettes Barred" 111). Arguing that women were too temperamental to handle an emergency, he recommended that women be transferred to land stations. Ultimately, wire-

less divisions successfully contained women operators: By 1913, when the CTUA's New York Wireless Division applied for new federally-mandated radio operating licenses, members "noticed with surprise" that no women enrolled for recertification ("Wireless Operators Rush" 58).

Additionally, the CTUA wireless division's campaign dovetailed with a corporate attack on female wireless employers. When the UWTWC collapsed in March 1912 after years of corruption, financial mismanagement, and fraudulent dealings, the American Marconi Company, a subsidiary of British Marconi, acquired the company's 500 ship and 70 land stations (Mayes 15-16). While the UWTWC hired women to ease the friction between management and male employees, American Marconi immediately began to fire or demote UWTWC female personnel. American Marconi argued that while there was no reason "why on general principles a woman should not be as competent a wireless telegrapher as a man," potentially dangerous ship-board operating was nonetheless an "undesirable occupation for a woman" ("Wireless Men Assail Bill" 11). It capitalized on loopholes in the new radio legislation to justify eliminating women from wireless positions entirely.

Significantly, the Department of Commerce and Labor permitted radio companies to hire who they pleased ("Regulations Governing Radio Communication"). For example, in early 1913, American Marconi fired Edith Coombs from her post aboard the North Pacific ocean liner *Roanoke* to hire a male replacement "less given to nervousness in time of stress, and in case of serious trouble [more] dependable" ("Women Are Not in Favor" 1). Similarly, in January 1913, wireless companies and government radio inspectors in San Francisco delayed thirty women's job appointments because officials would not entrust the lives of ship passengers and crew to emotionally volatile women ("Women Not Wanted" 6).

Female wireless operators parried male opposition, publicly asserting their technical proficiency and steadfastness in the face of crisis. In 1913, one woman wrote to *The Evening News* that "if her duty ever lies in the wireless room of an ocean liner overtaken by disaster, it is unquestionable that [the woman operator] will stick to her key, if necessary, until the ship sinks and the quick returning waters drown out the last note of 'Nearer, My God, to Thee'" (4). Likewise, aspiring wireless employee Edith Coombs declared that "'ladies first' will not apply to her as long as there is a spark of electricity to be sent from the vessel" ("Some Affairs of Women" 6). Yet women ultimately failed to counter their vociferous critics or companies' discriminatory hiring and firing policies.

Wireless operator Mabelle Kelso's travails are similar to those of many other women who lost their radio jobs in the aftermath of the *Titanic*. Dissatisfied with being a stenographer at a Washington lumber company, in 1908 Kelso enrolled in Pittsburgh Technical College to study Morse Code (Sando 100). After graduation, she worked for Western Union and Postal Telegraph, whose female union members had struck for better working conditions in 1907 (Sando 100; Jepsen 170-181). When in 1910 the United Wireless Telegraph Company offered to train two women, Kelso's Morse Code knowledge gave her a distinct advantage over less-experienced female applicants (Sando 100). After learning to make electrical repairs at sea, Kelso received a government-issued Certificate of Skill in Radio Communication (Sando 101). By 1912, she served aboard the *Mariposa*, an excursion boat traveling between Seattle and Alaska.

However, when American Marconi bought the UWTC, officials transferred Kelso to an isolated shore station in September 1912. She languished there, performing tedious wireless and clerical duties. Additionally, when the Radio Act of 1912 mandated that all operators pass a standardized licensing exam, the Department of Commerce and Labor suspended Kelso from her job ("Women Eligible as Wirelessettes" 452). Although Kelso passed the test in February 1913, she was demoted to a stenographic position at Marconi (Sando 101; *Seattle City Directory 1913* 958). She soon quit to pursue a higher paying stenographic job (Sando 101; *Seattle City Directory 1915* 941). Similarly, after a concerted effort on the part of company executives and labor unions to purge female radio staff, by the end of 1913, almost all female radio employees had quit or been fired ("Woman Radio Operator Weds" 111; Barslaag 249; "El Paso Local No. 68" 356; Sando 100; "Wireless to be Talked" 4). In the words of one wireless woman, "lady radio operators were no longer fashionable" ("The Autobiography of a Girl Amateur").

While several former wireless operators parlayed their technical skills into wireless instruction and radio-related work, after 1913, the only women garnering media attention were amateur radio enthusiasts. While they also challenged gender proscriptions, they did not compete with men for commercial radio jobs. It would not be until World War I that wireless companies and the federal government temporarily recruited women operators as part of the larger war effort (Hilmes 41).

Nonetheless, the actions of female wireless employees, while increasingly hampered by government, unions, and corporations, offer a window

into women's political consciousness and activism at a transitional moment in the wireless field and the American workforce at large. As technical elites, female wireless operators implied that professional prestige illustrated women's fitness for political enfranchisement. Ultimately, female wireless operators placed radio at the center of an idealized vision of work and gender equality. One woman conveyed the great promise and failure of early radio thusly: reminiscing about her adventures aboard the *Tamesi* in the 1910s and 1920s, "a look comes into Miss [Lena] Michelsen's eyes which shows her thoughts are far beyond the noise of the Broadway traffic in the street below and the soot of the city settling on the sill of the nearby window." Michelsen sighed, "It's a great life...You never can quite forget it" (Davis 20).

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